Fig. 1

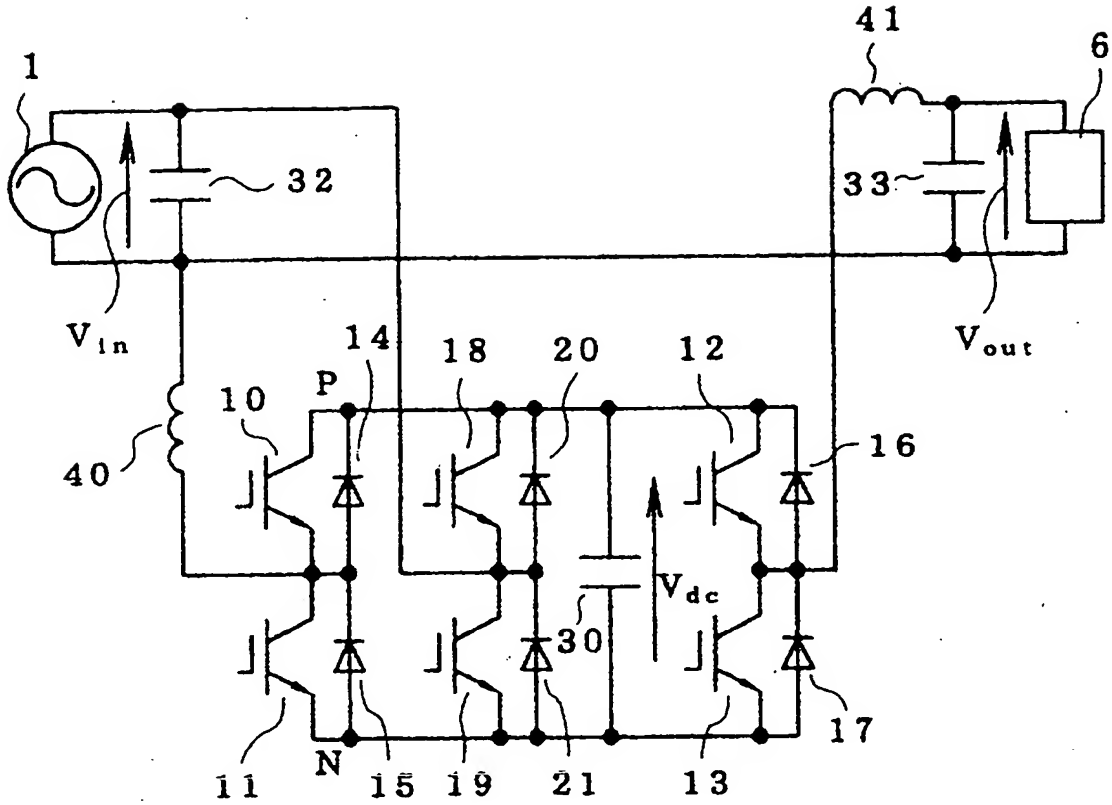

1
41
6
32
33
V_{in}
V_{out}
14
18
20
12
10
P
40
16
V_{dc}
30
17
11
N
15
19
21
13

Fig. 2

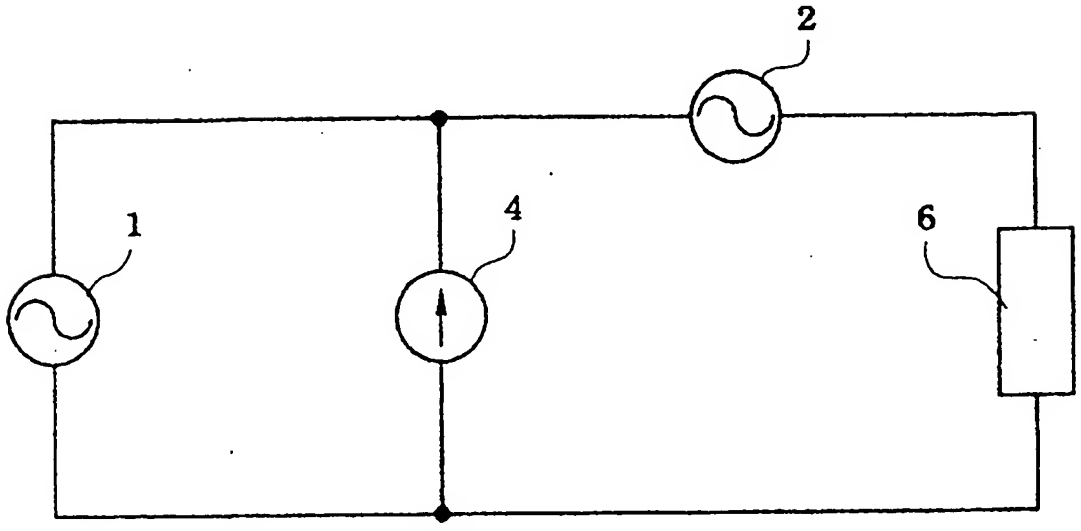

2
1
4
6

Fig. 3(a)(1)

Fig. 3(a)(2)

Fig. 3(a)(3)

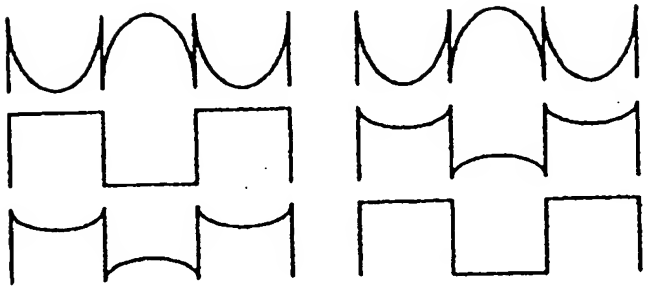
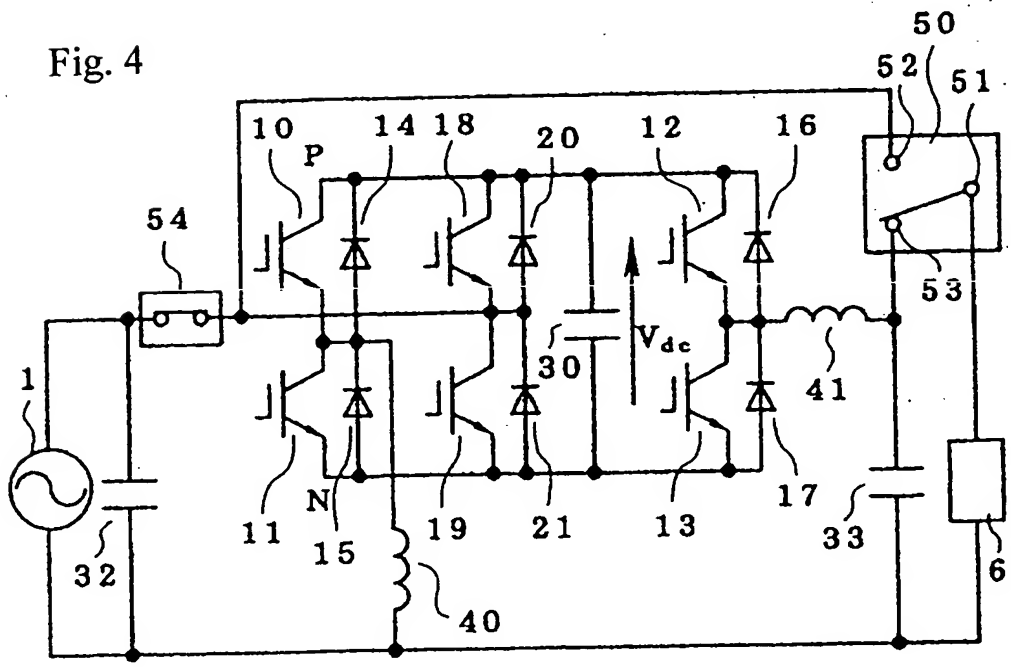


Fig. 3(b)(1)

Fig. 3(b)(2)

Fig. 3(b)(3)

Fig. 4



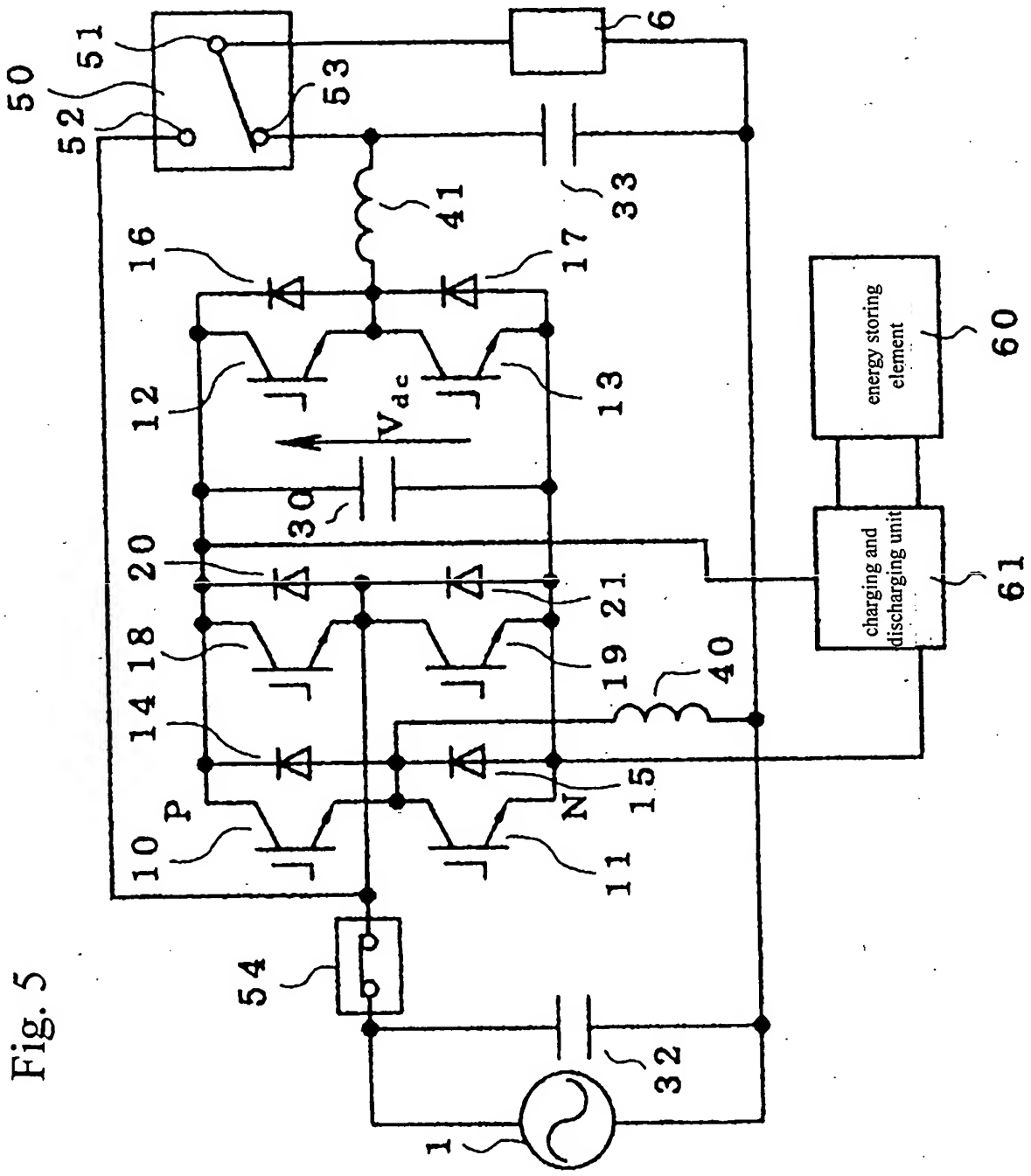

50
51
52
53
6
41
33
16
17
12
13
V_{dc}
30
20
21
18
19
40
14
15
P
N
10
11
54
32
1
energy storing element
60
charging and discharging unit
61

Fig. 5

Fig. 6

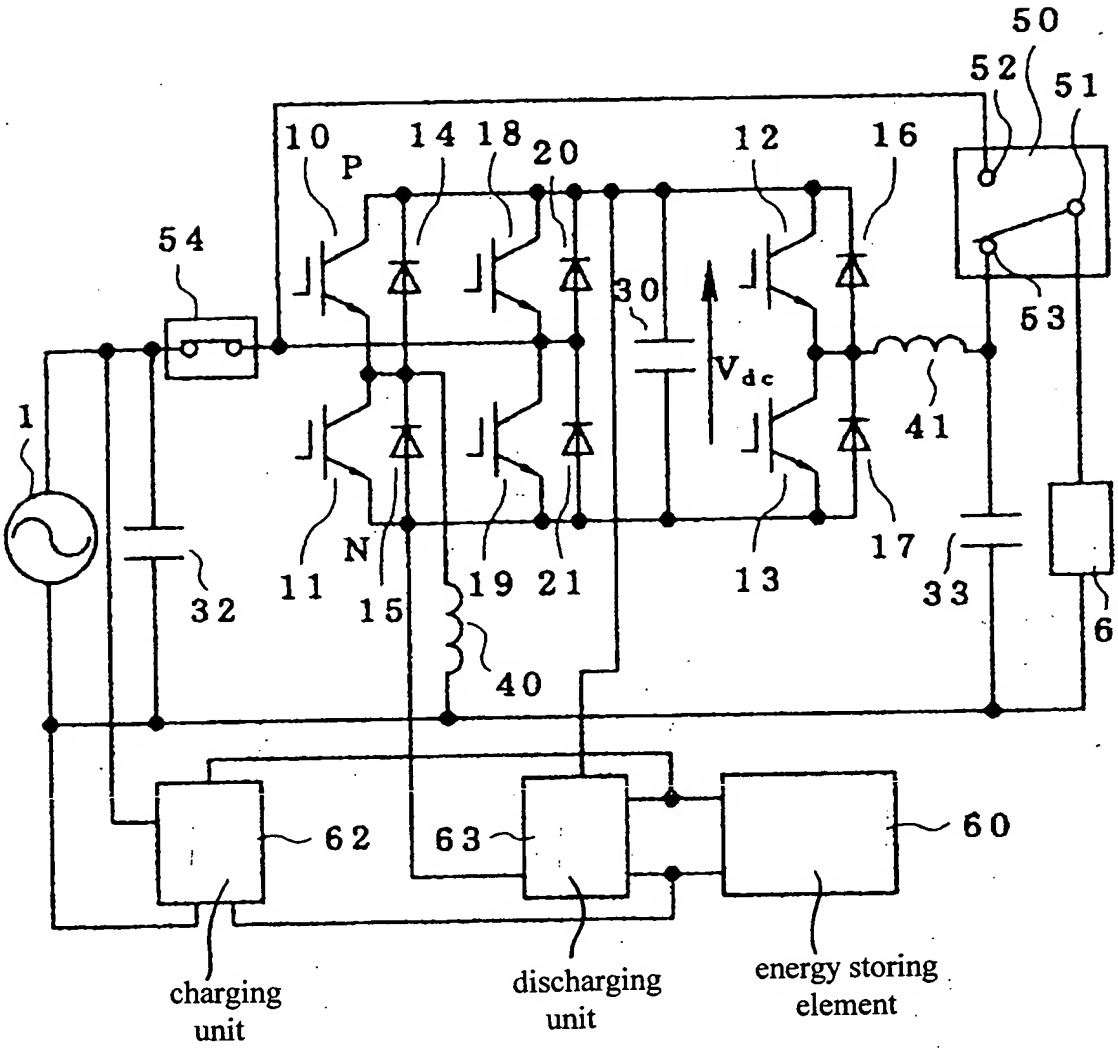

50
52
51
10
P
14
18
20
12
16
54
30
53
V_{dc}
1
41
N
11
15
19
21
13
17
33
32
6
40
62
63
60
charging unit
discharging unit
energy storing element

Fig. 7

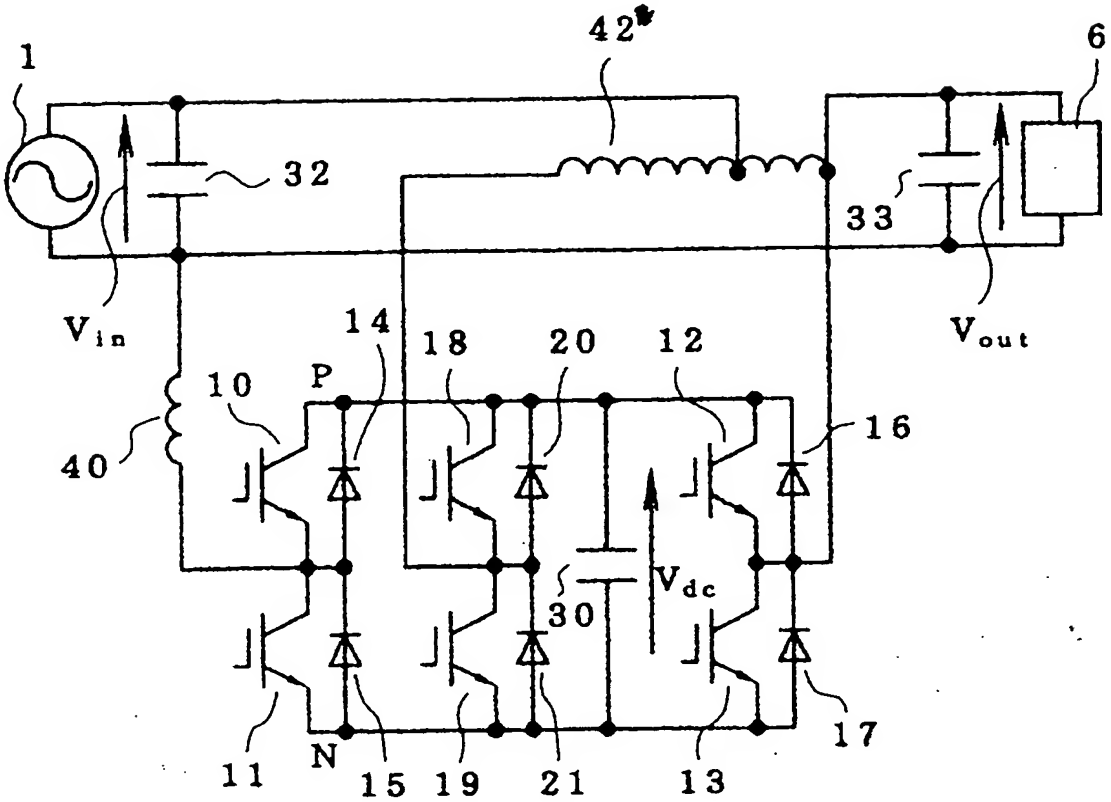

1
42
6
32
33
Vin
Vout
14
18
20
12
10
P
16
40
Vdc
30
17
11
N
15
19
21
13

Fig. 8

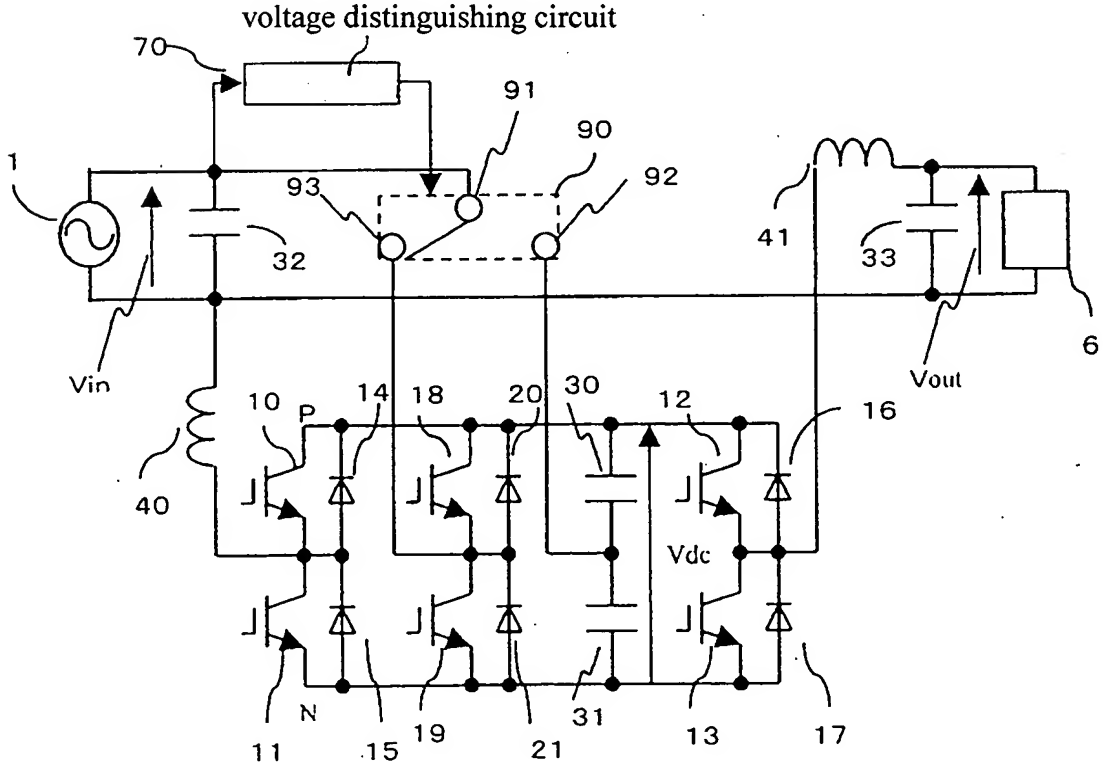

voltage distinguishing circuit
70
91
90
92
1
93
41
32
33
6
Vin
Vout
10
P
14
18
20
30
12
16
40
Vdc
N
11
15
19
21
31
13
17

Fig. 9

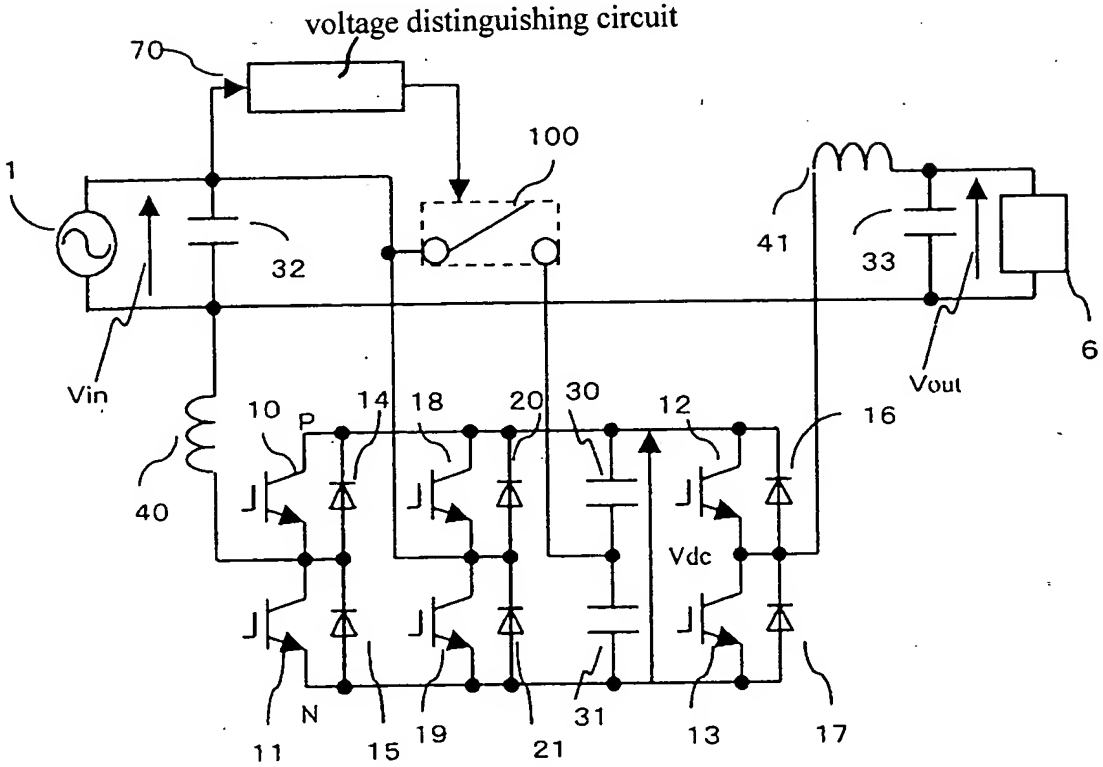


Fig. 10 (Prior Art)

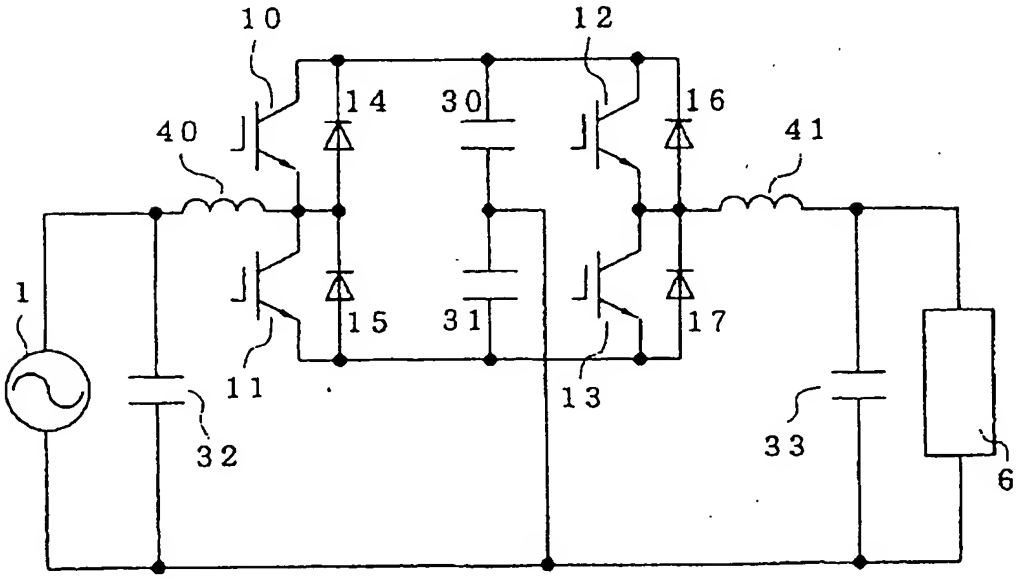


Fig. 11B (Prior Art)

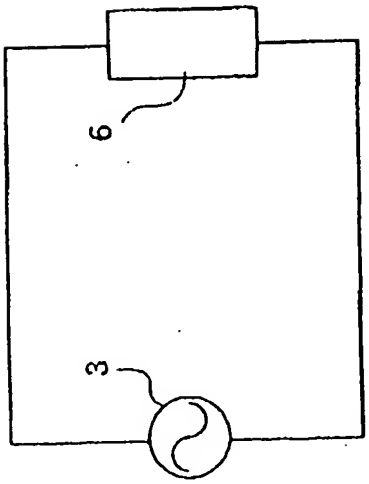


Fig. 11A (Prior Art)